

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 35

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID L. HALEY
and
TEDD W. WISHNESKI

Appeal No. 1998-3187
Application No. 08/130,517

ON BRIEF

Before KIMLIN, WALTZ and TIMM, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 19-21 and 25-32, all the claims remaining in the present application.

Claims 19 and 25 are illustrative:

19. A flexible polyurethane foam suitable for applications where latex is used and having an Indentation Force Deflection (25% IFD) of about 3 lbs. formed by a process comprising reacting:

Appeal No. 1998-3187
Application No. 08/130,517

a) 80 parts by weight of glycerine-based polyol having a molecular weight of about 6,000, a high primary hydroxyl content of about 75% and about 15% ethylene oxide cap;

b) 20 parts by weight of a triol polyol containing 22.5% by weight of a styrene-acrylonitrile copolymer dispersed in the continuous phase of said polyol;

c) 2 parts by weight of a glycerine-based polyol having a primary hydroxyl content of about 60% and about 70% ethylene oxide cap;

d) 32 parts by weight of a polymeric MDI (diphenyl methane diisocyanate) having a functionality of about 2.2 and a NCO content of about 32 weight% and an isocyanate index of about 0.80,;

e) 2.2 parts by weight of water;

f) 15 parts by weight of pentane; and

g) an amine catalyst.

25. A process for the manufacture of a flexible polyurethane foam suitable for applications where latex is used which consists essentially of reacting:

a) from about 70 to 90 parts by weight of a triol polyol having a primary hydroxyl content of about 50-80%, about 10-25% ethylene oxide cap and a molecular weight of about 3,000-6,500;

b) from about 30 to 10 parts by weight of a polymer triol polyol having a molecular weight of about 3,000-6,500;

c) from about 1 to 5 parts by weight of a triol polyol having a primary hydroxyl content of about 50-90% and about 40-90% ethylene oxide cap;

d) an isocyanate having a functionality of about 2.0-2.7, and an isocyanate index of about 0.75-1.0;

e) from about 1.5 to 3.5 parts by weight water;

Appeal No. 1998-3187
Application No. 08/130,517

- f) an auxiliary blowing agent; and
- g) an amine catalyst.

The examiner relies upon the following references as evidence of obviousness:¹

Hager (Hager '908)	5,011,908	Apr. 30, 1991
Hager (Hager '759)	5,171,759	Dec. 15, 1992

Appellants' claimed invention is directed to a flexible polyurethane foam formed by a process comprising reacting the recited components. According to page 1 of the present specification, appellants' polyurethane foam has "the feel and comfort properties of latex foam and . . . is suitable for cushioning because of its unique softness" (paragraph one).

All the appealed claims stand rejected under 35 U.S.C. § 103 as being unpatentable over Hager '908 or Hager '759.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we concur with the examiner that the subject matter of claims 25-28 and 32 would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103. Accordingly, we will

¹ Both references constitute the same disclosure inasmuch as Hager '759 is a divisional of Hager '908. All references to Hager in this decision will be to Hager '908.

sustain the examiner's rejection of claims 25-28 and 32 for essentially those reasons expressed by the examiner. However, we will not sustain the examiner's rejection of claims 19-21 and 29-31. Our reasoning follows.

Hager, like appellants, discloses flexible polyurethane foams formed from polymer polyol compositions. Appellants do not dispute the examiner's factual determination that Hager discloses claimed reactants (a) and (c), so-called high functionality polyol and subsidiary polyether polyol high in poly(oxyethylene) content, respectively. It is appellants' contention that Hager does not teach claimed reactant (b), a styrene-acrylonitrile copolymer dispersed in the continuous phase of a triol polyol (claim 19), or a polymer triol polyol having a molecular weight of about 3,000-6,500 (claim 25). In particular, appellants submit at page 11 of the principal brief (filed October 23, 1996) that "the Examiner's allegation that Hager teaches the use of Appellants' component (b) polymer triol polyol is fundamentally incorrect" (paragraph two). Appellants further maintain that "Hager does not disclose or teach obtaining a polyol composition ultimately comprising three different polyol composition components" (page 16 of principal brief, penultimate paragraph).

We do not subscribe to appellants' argument since it is abundantly clear to us that the flexible polyurethane foam of Hager is prepared by reacting, like appellants, three separate components, one of which may be a styrene-acrylonitrile copolymer dispersed in the continuous phase of a polyol. Hager expressly discloses that the compositions used to make the polyurethane foams "are comprised of a high functionality polyol, a subsidiary polyol high in poly(oxyethylene) content and a stably dispersed polymer" (column 1, lines 16-18). The third component is described as a stable dispersion in one or more of the disclosed polyols of a standard vinyl polymer or copolymer, preferably copolymers of acrylonitrile and styrene (see column 5, lines 26 et seq. and column 7, lines 3-5). Appellants have not advanced any argument that the polyol of claimed component (b) is any different than the polyol of Hager in which the vinyl polymer or copolymer is dispersed. Accordingly, we will sustain the examiner's rejection of claims 25-28 and 32, which do not recite any value for Indentation Force Deflection (IFD) or isocyanate index. We are mindful of appellants' argument that the claim language "consists essentially of" excludes the diethanolamine (DEOA) of Hager (Hager employs DEOA as a chain extender). However, as noted by the examiner, Hager teaches that the

extender is used "at levels of from about 0 to about 5 php" (column 7, line 19). While appellants contend that "about 0" does not include 0, there is no question that the language of Hager includes minor amounts of extender, e.g., 0.1 php. Since the language "consists essentially of" excludes only those materials which materially affect the basic nature of the composition, it is incumbent upon appellants to demonstrate that the inclusion of such minor amounts of extender would necessarily change the basic nature and characteristics of the claimed composition that is used to prepare the polyurethane foam. No such evidence, however, is of record.

The examiner's rejection of claims 19-21 and 29-31 is another matter. Claims 19 and 20 claim a foam having an IFD of about 3 lbs. and about 5 lbs., respectively, and each of claims 19-21 calls for a polymeric MDI having an isocyanate index of about 0.80. The vast majority of Hager's exemplified polyurethane foams have an IFD considerably greater than about 11 lbs. (claim 21 on appeal), whereas the lowest exemplified value for IFD is 12.25. Notwithstanding the general background provided by Hager at column 1, line 59 - column 2, line 21, Hager provides no specific teaching or suggestion how to obtain the claimed IFD values of 3 lbs. and 5 lbs. Also, as pointed out by

Appeal No. 1998-3187
Application No. 08/130,517

appellants, Hager discloses an isocyanate index of between 0.90 and 1.20 as opposed to commercial values of 1.0 to 1.15.² Consequently, it can be seen that Hager provides no guidance for obtaining a flexible polyurethane foam having the claimed IFD by using a polymeric MDI having the claimed isocyanate index of about 0.80. Appealed claims 29, 30 and 31 define polyurethane foams in accordance with claims 19, 20 and 21, respectively. We will not reverse the examiner's rejection of claim 32 since it recites an IFD of about 24 lbs. which is clearly taught by Hager.

In conclusion, based on the foregoing, the examiner's rejection of claims 25-28 and 32 is affirmed. The examiner's rejection of claims 19-21 and 29-31 is reversed. Accordingly, the examiner's decision rejecting the appealed claims is affirmed-in-part.

² The examiner has not challenged appellants' statement that the claimed 0.80 corresponds to 80 in Hager's terminology.

Appeal No. 1998-3187
Application No. 08/130,517

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED-IN-PART

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
)	
)	
)	
)	
THOMAS A. WALTZ)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
)	
CATHERINE TIMM)	
Administrative Patent Judge)	

ECK:clm

Appeal No. 1998-3187
Application No. 08/130,517

Beveridge, Degrandi, Weilacher & Young
Suite 800, 1850 M St., N.W.
Washington, DC 20036